

REMARKS

Applicants have added new claims 27-40 to round out the scope of the claims. Support for these claims may be found at paragraphs [0058] through [0073] of applicants' specification.

Claims 1, 10, 11, 21 and 24-26 stand rejected under 35 USC 112, first paragraph.

Applicants respectfully traverse this rejection.

The Examiner asserts that applicants' specification fails to "describe any embodiments wherein the active layer is directly deposited onto the lower clad without the guide layer being placed between the two." Applicants have amended the claims such that they no longer recite directly depositing the active layer. Accordingly, the rejection is mooted and claims 1, 10, 11, 21 and 24-26 are allowable.

Claims 2-9, 12-19, 22 and 23 appear to be both Withdrawn and rejected under 35 USC 112, first paragraph. Applicants submit that it is not proper for the Examiner to reject withdrawn claims in this manner. However, in the interest of expediting prosecution, applicants have amended the claims such that they no longer recite directly depositing the active layer. The rejection of claims 2-9, 12-19, 22 and 23 is therefore mooted in a manner similar to the rejection of claims 1, 10, 11, 21 and 24-26, above.

Claims 1, 10, 11, 21 and 24-26 stand rejected under 35 USC 102(e) on Ohkubo (U.S. Patent No. 6,912,237). Applicants respectfully traverse this rejection.

Applicants have amended claim 1 to recite, "a first conductivity-type semiconductor substrate; a first conductivity-type lower clad layer deposited on the first conductivity-type semiconductor substrate; a lower guide layer deposited on the first conductivity-type lower clad layer; a quantum well active layer deposited on the lower guide layer; an upper guide layer deposited on the quantum well active layer; and a second conductivity-type upper clad layer deposited on the upper guide layer, wherein the upper guide layer and the lower guide layer are made of an AlGaAs based material," as depicted in applicants' Fig. 1. These features are not

disclosed or suggested by Ohkubo. Specifically, Ohkubo does not disclose or suggest the lower guide layer or the upper guide layer as recited.

The Examiner has asserted that Ohkubo discloses a device in which a quantum well active layer is deposited directly on a first conductivity type lower clad layer and a second conductivity type upper clad layer which is then deposited directly on the quantum well active layer. Ohkubo does not disclose guide layers, nor does the Examiner so assert. Accordingly, claim 1 is allowable over Ohkubo.

Claim 1 is therefore allowable. Independent claims 11, 21, 24 and 25 recite features substantially similar to those of claim 1 discussed above, and are allowable for at least the same reasons as claim 1. Claims 10 and 26 depend from allowable claims and are allowable due at least to their respective dependencies.

Claims 10 and 20 stand rejected under 35 USC 103(a) on Ohkubo. Applicants respectfully traverse this rejection. A detailed above, Ohkubo does not disclose or suggest all of the features recite in claim 1. Claim 10 is allowable for at least the above stated reason. Claim 20 is allowable due at least to its dependency.

In the event the U.S. Patent and Trademark Office determines that an extension and/or other relief is required, applicants petition for any required relief, including extensions of time, and authorize the Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to **Deposit Account No. 03-1952** referencing Docket No. **204552030500**.

Dated: November 13, 2007

Respectfully submitted,

By 
Adam Keser
Registration No. 54,217
MORRISON & FOERSTER LLP
1650 Tysons Blvd, Suite 400
McLean, Virginia 22102
(703) 760-7301